WHAT IS CLAIMED IS:

1. A vertical-cavity surface emitting laser diode comprising a current confinement portion having a mesa including an oxidizee layer, the oxidizee layer having an oxidized part and a non-oxidized part, the oxidized part being formed by oxidizing the oxidizee layer from a side wall of the mesa, an electric current being injected on the non-oxidized part,

the oxidizee layer having a proton-containing part including proton at a position substantially enclosing the non-oxidized part.

2. The vertical-cavity surface emitting laser diode according to claim 1, wherein the proton-containing part is provided selectively near a boundary between the oxidized part and the non-oxidized part, and is not provided near a center of the non-oxidized part.

3. The vertical-cavity surface emitting laser diode according to claim 1, wherein a concentration of proton in the proton-containing part is equal to or less than $1 \times 10^{18}/cm^3$.

4. The vertical-cavity surface emitting laser

diode according to claim 1, further comprising:

an active layer; and

a film which gives a tensile stress to the active layer in a direction along a surface of the film.

5. A vertical-cavity surface emitting laser diode comprising a current confinement portion having a mesa including an oxidizee layer, the oxidizee layer having an oxidized part and a non-oxidized part, the oxidized part being formed by oxidizing the oxidizee layer from a side wall of the mesa, and an electric current being injected into the non-oxidized part, the non-oxidized part including proton.

6. The vertical-cavity surface emitting laser diode according to claim 5, wherein a concentration of proton in the non-oxidized part is equal to or less than $1 \times 10^{18}/cm^3$.

7. The vertical-cavity surface emitting laser diode according to claim 5, further comprising:

an active layer; and

a film which gives a tensile stress to the active layer in a direction along a major surface of the film.

8. A vertical-cavity surface emitting laser diode

comprising:

a first and a second reflectors;

an active layer provided between the first and the second reflectors; and

an oxidizee layer having a non-oxidized part and an oxidized part provided around the non-oxidized part,

an electric current being injected into the non-oxidized part, and

the oxidizee layer having a proton-containing part including proton at least at a position substantially enclosing the non-oxidized part.

9. The vertical-cavity surface emitting laser diode according to claim 8, wherein the proton-containing part is provided selectively near a boundary between the oxidized part and the non-oxidized part, and is not provided near a center of the non-oxidized part.

10. The vertical-cavity surface emitting laser diode according to claim 8, wherein the proton-containing part is provided all over the non-oxidized part.

11. The vertical-cavity surface emitting laser diode according to claim 8, wherein a concentration of proton in the proton-containing part is equal to or less

than $1 \times 10^{18}/cm^3$.

12. The vertical-cavity surface emitting laser diode according to claim 8, further comprising a film which gives a tensile stress to the active layer in a direction along a major surface of the film.

13. A vertical-cavity surface emitting laser diode comprising:

a substrate;

an active layer provided on the substrate and having a emitting part;

a first and a second reflectors sandwiching the active layer therebetween and forming a laser cavity vertical to the substrate;

a pair of electrodes provided to inject an electric current into the active layer; and

an oxidizee layer provided above or below the active layer;

a mesa being formed to include the oxidizee layer, and

the oxidizee layer having an oxidized part of a high resistance extending from a side wall of the mesa to a proximity of the emitting part, a non-oxidized part of a low resistance surrounded by the oxidized part, and a proton-containing part including proton at least at a

position substantially enclosing the non-oxidized part.

14. The vertical-cavity surface emitting laser diode according to claim 13, wherein;

the proton-containing part is provided selectively near a boundary between the oxidized part and the non-oxidized part, and is not provided near a center of the non-oxidized part,

one of the electrodes which is provided above the active layer has an opening to release a light emitted from the active layer, and

the opening is larger than an portion of the non-oxidized part which is inner than the proton-containing part.

15. The vertical-cavity surface emitting laser diode according to claim 13, wherein the proton-containing part is provided selectively near a boundary between the oxidized part and the non-oxidized part, and is not provided near a center of the non-oxidized part.

16. The vertical-cavity surface emitting laser diode according to claim 13, wherein the proton-containing part is provided all over the non-oxidized part.

17. The vertical-cavity surface emitting laser diode according to claim 13, wherein a concentration of proton in the proton-containing part is equal to or less than $1 \times 10^{18}/cm^3$.

18. The vertical-cavity surface emitting laser diode according to claim 13, further comprising a film which gives a tensile stress to the active layer in a direction along a surface of the film.

19. A method of manufacturing a vertical-cavity surface emitting laser diode having a current confinement portion having an oxidizee layer, the oxidizee layer having an oxidized part and a non-oxidized part, the oxidized part being formed by oxidizing a part of the oxidizee layer, an electric current being concentrated on the non-oxidized part, comprising:

forming a proton-containing part in the oxidizee layer by selectively implanting proton into the oxidizee layer; and

forming the oxidized part by oxidizing the oxidizee layer from an side face thereof to the proton-containing part.

20. The method of manufacturing a vertical-cavity

surface emitting laser diode according to claim 19, wherein a concentration of proton in the proton-containing part is equal to or less than $1 \times 10^{18}/cm^3$.